FIG.1

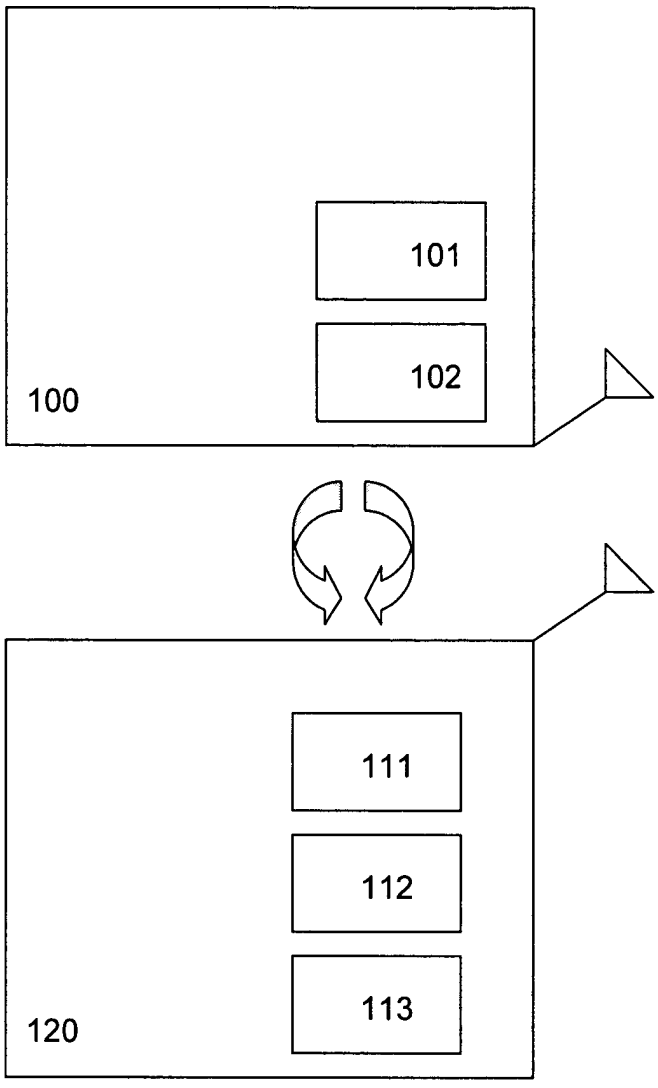


FIG. 2

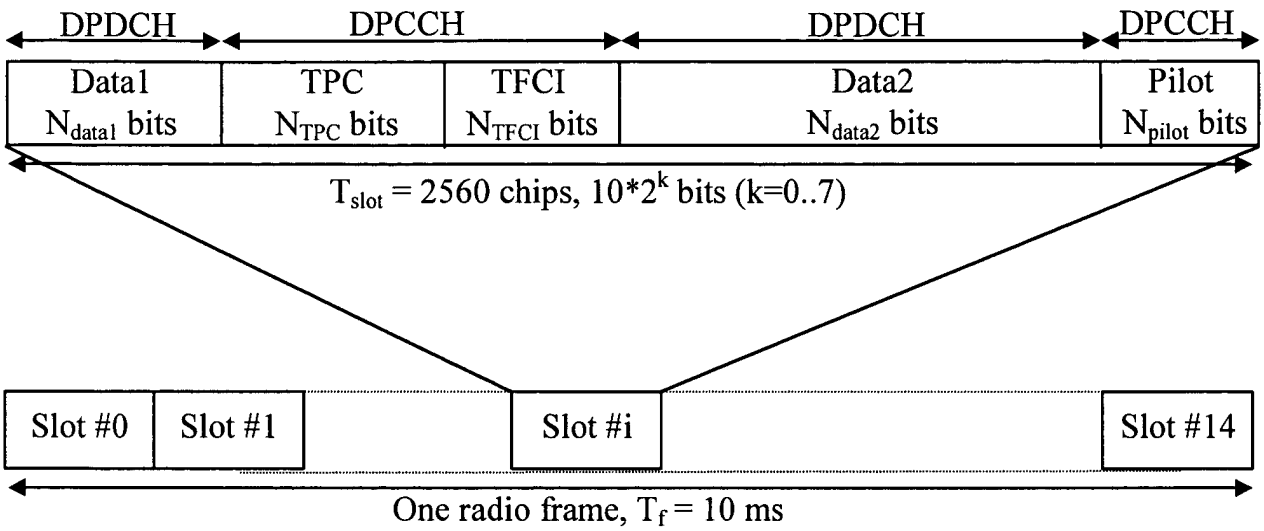

DPDCH
DPCCH
DPDCH
DPCCH
Data1
N_{data1} bits
TPC
N_{TPC} bits
TFCI
N_{TFCI} bits
Data2
N_{data2} bits
Pilot
N_{pilot} bits
T_{slot} = 2560 chips, $10*2^k$ bits (k=0..7)
Slot #0
Slot #1
Slot #i
Slot #14
One radio frame, T_f = 10 ms

FIG. 3

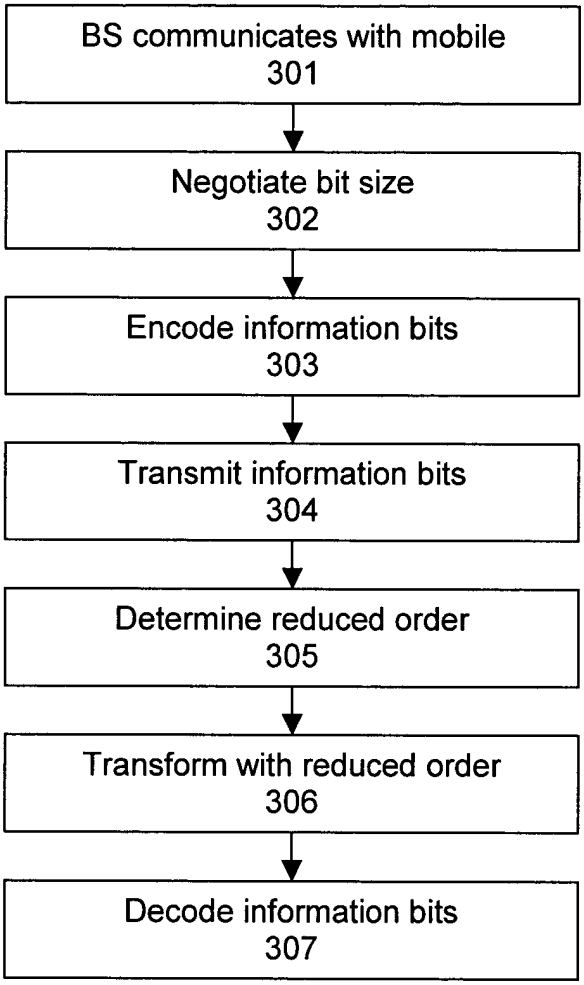

BS communicates with mobile
301
Negotiate bit size
302
Encode information bits
303
Transmit information bits
304
Determine reduced order
305
Transform with reduced order
306
Decode information bits
307

FIG. 4

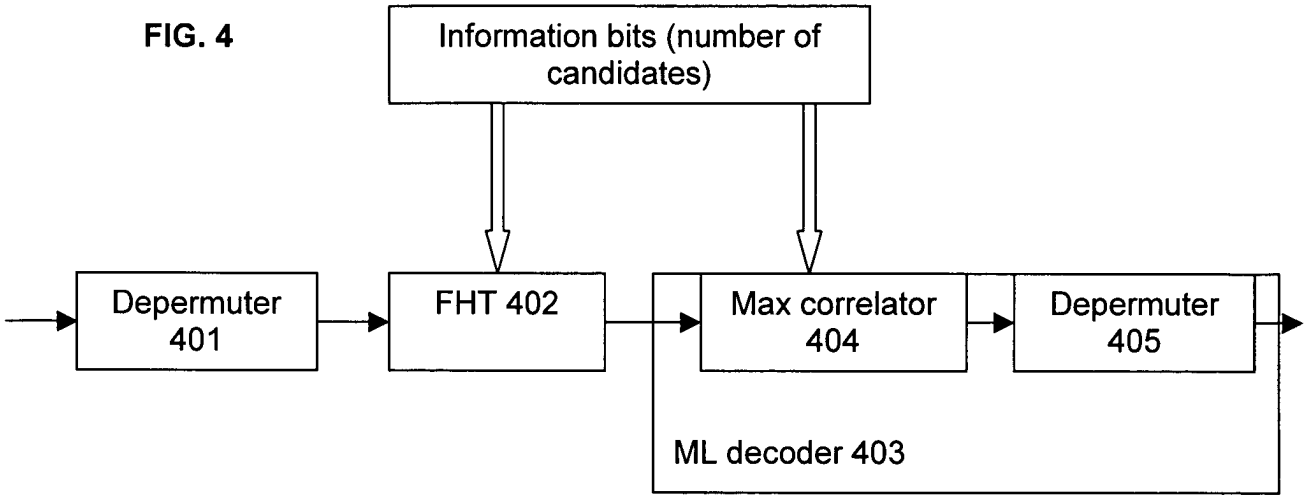

Information bits (number of candidates)
Depermuter 401
FHT 402
Max correlator 404
Depermuter 405
ML decoder 403

FIG. 5

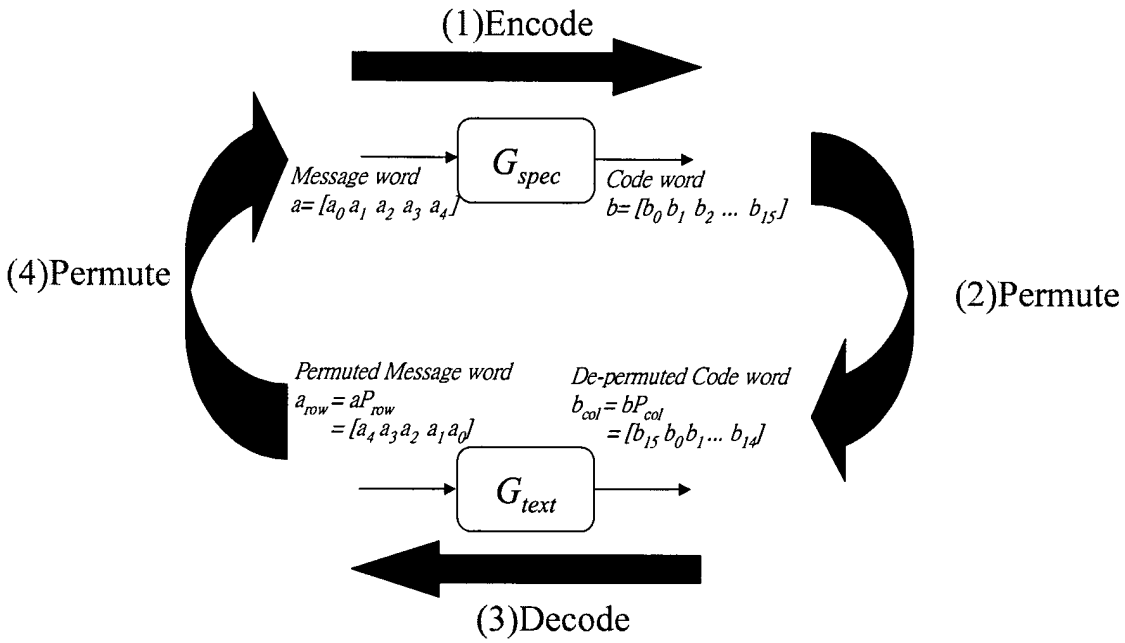
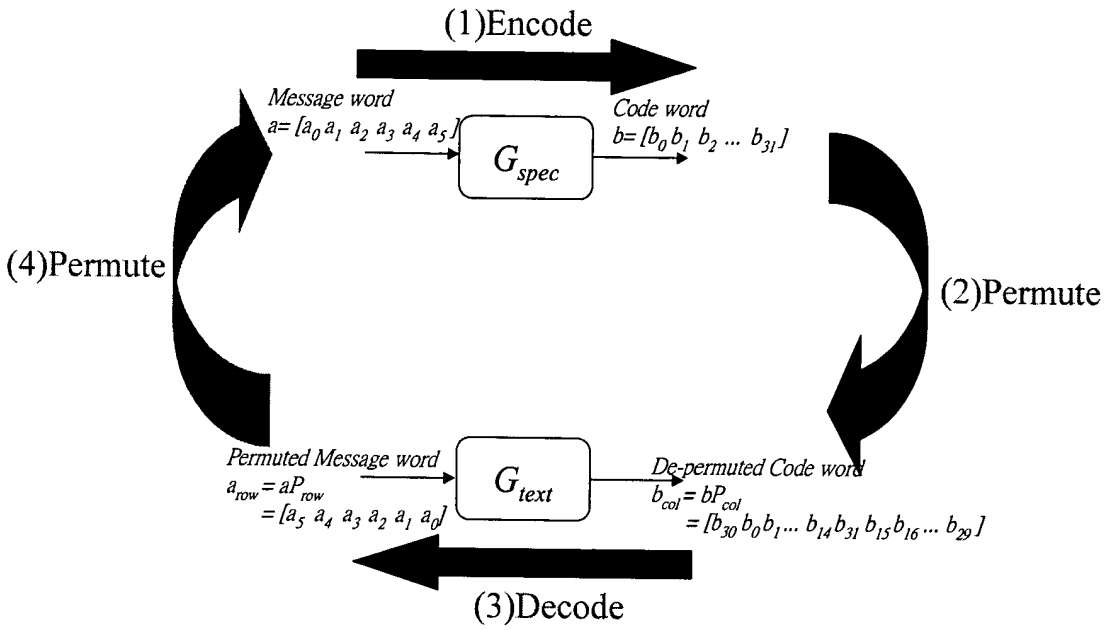

(1)Encode
Message word
a= [a0 a1 a2 a3 a4]
Gspec
Code word
b= [b0 b1 b2 ... b15]
(2)Permute
(3)Decode
Permuted Message word
arow = aProw
= [a4 a3 a2 a1 a0]
De-permuted Code word
bcol = bPcol
= [b15 b0 b1 ... b14]
Gtext
(4)Permute

FIG. 6


(1)Encode
Message word
$a=[a_0\ a_1\ a_2\ a_3\ a_4\ a_5]$
G_{spec}
Code word
$b=[b_0\ b_1\ b_2\ \ldots\ b_{31}]$
(2)Permute
(3)Decode
Permuted Message word
$a_{row}=aP_{row}$
$=[a_5\ a_4\ a_3\ a_2\ a_1\ a_0]$
G_{text}
De-permuted Code word
$b_{col}=bP_{col}$
$=[b_{30}\ b_0\ b_1\ \ldots\ b_{14}\ b_{31}\ b_{15}\ b_{16}\ \ldots\ b_{29}]$
(4)Permute